tronic devices seek to minimize. It should be further noted that conductive material cannot be eliminated completely as PCMCIA requires a grounding point. The covers 12 & 14 will generally be mirror images of each other, but may not be in certain applications.

An optional addition to the present invention is to coat the interior of the covers 12 & 14 with a thin layer of a non-conductive material. This allows the finished product to have a conductive exterior with a non-conductive interior, thus isolating the conductivity of the interior of the package.

Referring now to FIGS. 2 & 3, a lower energy director 20 extends above one-half of the perimeter upper surface of the lower frame element 18. A corresponding energy director element 22 extends along one-half of the lower perimeter surface of the upper frame element 16. These energy directors 20 & 22 mate with the corresponding frame surface to form the weld during the sonic welding process.

A polarizing key 24 is located at a corner of the lower frame element 18. The polarizing key 24 defines how the PCMCIA style peripheral device mates with the device in which it is being used. The polarizing key is defined for a given use by PCMCIA.

In order to facilitate bonding, the edges of the covers 12 & 14 are bent to conform to the shape of the frame elements 16 & 18. In addition, metal fingers 26 are provided on each side of the covers 12 & 14. The metal fingers 26 become embedded in the plastic frame elements 16 & 18 during the bonding and/or molding process to form an integral frame cover element. This ensures that the two halves of the package can be securely affixed to each other. The covers 12 & 14 being wrapped around the frame elements 16 & 18 also serves to strengthen the package due to the fact that a double layer of metal is formed at the perimeter of the package.

The manufacture of the PCMCIA style peripheral device with its package is accomplished as follows: first, the upper and lower covers 12 & 14 are stamped. The covers 12 & 14 are then mated with the frame elements 16 & 18. This is accomplished by injection molding. The covers 12 & 14 are placed into a mold, where they are "self-secured" in position. The self-securing is accomplished by the geometry and dimensions of the covers 12 & 14. The covers 12 & 14 are stamped to be slightly wider than the mold. Thus the covers are slightly sprung when they are placed into the mold, and remain in the proper position for the injection process. Certainly there is no requirement that the covers be self-secured in the mold. Any means of securing will suffice.

The plastic frame elements 16 & 18 are then shot into the mold. As the plastic frames are molded, the metal fingers 26 on the covers 12 & 14 become embedded in the frame elements 16 & 18 so that separation of the covers 12 & 14 from the frame elements 16 & 18 cannot take place. As shown in Figure 4, the [The] end result of the molding process is that the covers 12 & 14 have a metal surface exposed at their sides to create a grounding point 30 when bonded together. Further toward the interior of the unit, the plastic energy directors 20 & 22 are also exposed to facilitate bonding 23.

One aspect of using an injection molding process is that injection molding requires that ejector pins 17 be provided on the frame elements 16 & 18. In the present invention, the ejector pins 17 are also used to position a PCB 28 that is to be packaged in the package 10. The pins 17 provide a supporting surface for the PCB 28 which can be adjusted to any height desired for a particular application. Thus an element necessary for the injection process becomes a key for the positioning of the board in the package. Positioning of the PCB is therefore accomplished easily and at minimal additional cost.

The energy directors 20 & 22 are then sonic welded to the opposing plastic frame element so that the upper frame element 16 is permanently bonded to the lower frame element 18, both of which encase the PCB 28.

Thus the covers are secured to the frame elements, which in turn are welded to each other. This ensures that the memory card package will be very reliable and durable, and that the package height is controlled.

It should be noted that it is envisioned that the bonding process between the cover elements may also be performed by resistance welding.

A further option is to inject a foam into the interior of the package which would crystallize and act as an insulator or a heat sink.

It should also be noted that in practice, a card manufacturer will receive the two cover halves ready for welding, and will be the supplier of the board. Because the package has a modular design, it will accommodate many different connectors. Further, because the package manufacturer has accomplished a secure bonding of dissimilar materials, the metal covers bonded to the plastic frame, the bonding required by the card manufacturer is a simple process involving only bonding of like materials, i.e. plastic to plastic sonic welding.

The above disclosure is not intended as limiting. Those skilled in the art will readily observe that numerous modifications and alterations of the device may be made while retaining the teachings of the invention. Accordingly, the above disclosure should be construed as limited only by the metes and bounds of the appended claims.

We claim:

1. A peripheral device PCB package comprising: two stamped metal covers with a plastic frame element corresponding to each cover; each cover having a first side and second side with a plurality of fingers extending from said sides and wherein edges of the metal covers are bent to conform to the shape of the frame and said fingers are embedded in the plastic frame elements forming an integral unit, the plastic frame elements being injected molded around the fingers;

and wherein the plastic frame element extends beyond [the] a plane of the metal cover so that a plastic perimeter surface is exposed, thereby facilitating bonding of the two covers.

2. The package as claimed in claim 1 wherein:
ejector pins on the plastic frames are provided to position a PCB.

3. The package as claimed in claim 1 wherein:
the plastic frame elements include a polarizing key.

4. The package as claimed in claim 1 wherein:
the plastic frame elements include energy directors.

5. The package as claimed in claim 1 wherein:
a grounding point is established by metal-to-metal contact of the covers.

6. The package as claimed in claim 1 wherein:
the interiors of the covers are coated with a thin layer of non-conductive material.

7. The package as claimed in claim 1 wherein the plastic perimeter surface is internally formed with the plastic frame elements.

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